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Interactions and Public Spending:
The Political Aspects of Wage-led Recovery**

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Wage- versus Profit-led Growth in the Context of International Interactions and Public Spending: The Political Aspects of Wage-led Recovery

Abstract: This paper presents the empirical evidence about the impact of the simultaneous race to the bottom in labour's share on growth after taking global interactions into account based on the Post-Kaleckian theoretical framework developed by Bhaduri and Marglin (1990). The world economy and large economic areas are likely to be wage-led; and parameter shifts in different periods are unlikely to make a difference in this finding. The effects that can come from a wage-led recovery on growth and hence employment are positive, however they are also modest in magnitude. We then present an alternative scenario based on a policy mix of wage increases and public investment. A coordinated mix of policies in the G20 targeted to increase the share of wages in GDP by 1%-5% in the next 5 years and to raise public investment in social and physical infrastructure by 1% of GDP in each country can create up to 5.84% more growth in G20 countries. The final section addresses the political aspects and barriers to a wage-led recovery.

Keywords: wage share, wage-led growth, globalization, public investment

JEL classifications: E12, E22, E25

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1. Introduction

The share of wages in national income (GDP) has declined by around 10 percentage points in the G20 countries over the past three decades along with lower and more volatile growth rates in the majority of the countries (Onaran and Galanis, 2014). These stylised facts of distribution and growth clearly pose a puzzle from the perspective of the mainstream policies. The Financial Times has reported on these findings by Onaran and Galanis (2014) with the title “Capital gobbles labour’s share, but victory is empty” (Johnson, 2013). Why is growth lower in the post-1980s despite a rise in the profit share?

Post-Keynesian/post-Kaleckian models address this puzzle by integrating the dual role of wages both as a cost and a source of demand. The theoretical models have been formally developed by Rowthorn (1981), Dutt (1984), Taylor (1985), Blecker (1989), Bhaduri and Marglin (1990). These models synthesize ideas of Keynes, Kalecki, and Marx, and while they accept the direct positive effects of higher profits on private investment and net exports as emphasized in mainstream models, they contrast these positive effects with the negative effects on consumption. Demand plays a central role in determining growth, and functional income distribution between wages and profits have a crucial effect on demand. The total effect of the decrease in the wage share on aggregate demand of the private sector (households and firms) depends on the relative size of the reactions of consumption, private investment and net exports to changes in income distribution. If the total effect is negative, the demand regime is called wage-led; otherwise the regime is profit-led. Theoretically, both are likely scenarios, and whether the negative effect of lower wages on consumption or the positive effect on investment and net exports is larger in absolute value is an empirical question depending on the parameters of an economy. If consumption is very sensitive to distribution, i.e. if the differences in the marginal propensity to consume out of wages and profits is very high; if investment is not very sensitive to profits, but responds more to demand; if domestic demand constitutes a more significant part of aggregate demand; and if net exports are not very responsive to relative prices and the effect of labour costs on export prices are not very large, then the economy is more likely to be wage-led. If the responsiveness of investment to profits is rather strong and foreign trade is an important part of the economy (as it is the case in small open economies) and is very responsive to labour costs, then the economy is more likely to be profit-led. In a wage-led economy, a fall in the

labour share would generate a decline in GDP; for growth a higher wage share is required. Pro-capital policies would generate more growth only if an economy is profit-led.

The Post-Kaleckian model generalized by Bhaduri and Marglin (1990:388) offers a flexible synthesis model of distribution and growth: “Particular *models* such as that of ‘cooperative capitalism’ enunciated by the left Keynesian social democrats, the Marxian model of ‘profit squeeze’ or even the conservative model relying on ‘supply-side’ stimulus through high profitability and a low real wage... become particular *variants* of the theoretical framework presented here.”

While Post-Kaleckian models offer a general theory, which allows for different regimes and opposing effects of the wage share on growth, mainstream economic policy assumes that all economies are profit-led. Indeed the mainstream argument goes beyond that since the European Commission’s (EC, 2006; 2013) policy of wage moderation is prescribed to all the countries in Europe; hence the EC implicitly assumes that Europe as a whole is profit-led. Similarly, these policies have been exported to the developing world through the IMF and the World Bank; hence the implicit assumption must be that the World as a whole is profit-led.

The significant fall in the wage share has also been associated with increasing personal income inequality. Research shows that changes in the factor distribution of income are an important explanatory determinant of personal income inequality (e.g. Daudey and Garcia-Penalosa, 2007; Dafermos and Papatheodorou, 2011). Atkinson (2009) argues that analysing changes in functional income distribution is crucial to understand trends of increasing dispersion in personal incomes.

Rising personal income inequality has been listed by even the World Economic Forum, which represents the interests of big global businesses, as the greatest global risk since 2012. Christine Lagarde, Managing Director of the International Monetary Fund (IMF), in her speech at the 2013 World Economic Forum said: “Excessive inequality is corrosive to growth; it is corrosive to society. I believe that the economics profession and the policy community have downplayed inequality for too long.” At the research departments of the international institutions such as the IMF or the OECD, there is recently some recognition that inequality deters growth (e.g. Berg et al., 2012; Foerster and Cingano 2014), although the channels for the negative effects in the analysis remain to be limited to supply side factors such as barriers to human capital accumulation, and there is a remarkable absence of the demand side factors in their analysis. This research builds on new institutionalist political

economy inspired by neoclassical insights. Potential channels for the adverse effects of inequality highlighted in this literature include the negative effects of credit market imperfections on human capital accumulation (Galor and Zeira, 1993); the higher risk of public support for redistribution due to greater inequality, which leads to higher tax rates on capital, discourages investment and hinders growth (Alesina and Rodrik, 1994; Persson and Tabellini, 1994); higher political instability and uncertainty due to inequality, which impedes investments (Alesina and Perotti, 1996). However, this research does not prevent the insistence of the IMF technical team in low minimum wages and deregulation in the labour market as the key structural reform in Greece during the negotiations about the conditionalities of the loan agreements. Hence, it is also unsurprising that it also does not make an impact on the EC's policy stance.

The next section presents the empirical evidence about the impact of the simultaneous race to the bottom in labour's share on growth after taking global interactions into account. Section three then presents an alternative scenario based on a policy mix of wage increases and public investment. The final section will address the political aspects and barriers to a wage-led recovery.

2. Empirical evidence for wage-led growth

This section first summarises our most recent estimation results regarding the effects of the changes in the wage share on growth based on Onaran and Galanis (2014) for the major developed and developing G20 countries, for which there is data for the wage share since at least the 1970s. These countries constitute more than 80% of global GDP. In this work, we go beyond the nation state as the unit of analysis and discuss the global effects based on the responses of each country to changes, not only in domestic income distribution, but also to trade partners' wage shares. A change in the wage share of a trade partner affects the import prices and foreign demand for each country. This global interaction is significant, as pro-capital redistribution policies have been implemented almost simultaneously in many developed and developing countries in the post-1980s period. Because of this, we have experienced a global "race to the bottom" in the wage share.

The empirical analysis is based on econometric estimations of consumption, investment, exports, and imports. Consumption is estimated as a function of adjusted profits, and adjusted wages. Our findings show that the marginal propensity to consume out of profits is lower than that out of wages in all countries; thus, a rise in the profit share leads to a

decline in consumption. Private investment is estimated as a function of output and the profit share. To estimate the effects of distribution on net exports, we follow a stepwise approach: Exports are estimated as a function of export/import prices, and the GDP of the rest of the world; imports as a function of domestic prices/import prices, and home country GDP; domestic prices and export prices, are estimated as functions of nominal unit labour costs and import prices. The total effect of a change in the wage share on exports encompasses the effects of nominal unit labour costs on prices, of prices on export prices, and of export prices on exports. The effect of a change in the wage share on GDP via international trade not only depends on the sensitivity of exports and imports to prices and the extent of pass-through from labour costs to prices, which in turn depend on the share of labour costs in total costs, but also on the degree of openness of the economy (*i.e.*, on the share of exports and imports in GDP);¹ thus in relatively small open economies net exports may play a major role in determining the overall outcome; the effect becomes much lower in relatively closed large economies.

The total effect of the decrease in the wage share on aggregate demand of the private sector (households and firms) depends on the overall impact on consumption, private investment and net exports of changes in functional income distribution. If the total effect is negative, the economy is termed “wage-led”; if the effect is positive, the regime is termed “profit-led”.

Table 1 summarises the effects of a 1%-point increase in the profit share on consumption, investment, and net exports based on the estimations by Onaran and Galanis (2014).

One finding stands out for all countries: When the profit share increases the fall in domestic consumption outweighs the rise in private investment. Leaving exports and imports aside and looking at only the effects on domestic demand, *i.e.* the effects on consumption and investment (in columns A and B), the negative effect in absolute terms of the increase in the profit share on private consumption is substantially larger than the positive effect on private investment in all countries. This means that demand in the domestic sector of economies, leaving the foreign demand aside, is clearly wage-led. Consistent with our findings, previous findings for the individual countries in the literature also mostly conclude that domestic demand is wage-led. See Stockhammer et al (2009) for the Euro area; Stockhammer and Stehrer (2011) for Germany, France, US, Japan, Canada, Australia; Naastepad and Storm

¹ See Onaran and Galanis (2014) for the details of the theoretical model.

(2007) for Germany, France, Italy, UK; Hein and Vogel (2008) for Germany, France, UK, US; Bowles and Boyer (1995) for Germany, France, UK, US, Japan; Stockhammer et al (2011) for Germany, and Ederer and Stockhammer (2007) for France. Hence, domestic demand unambiguously contracts when the wage share falls and the profit share increases. However, the effects on net exports in Column C have a crucial role in determining whether the economy is profit-led. Column D sets out the total effect on private demand. Column E shows the total effects after the multiplier process: The initial change in private demand due to a change in income distribution leads to a multiplier mechanism, which affects consumption, investment, and imports. This magnifies the effects of a change in income distribution on aggregate demand further. If the total effect in columns D and E is negative, then the economy is wage-led; thus, a rise in the profit share leads to a negative effect on growth.

The Eurozone-12, the UK, the US, Japan, Turkey and Korea are wage-led economies. Overall, the results indicate that large, relatively closed economies are more likely to be wage-led. To illustrate, in the Eurozone-12 a 1%-point increase in the profit share leads to a 0.13% decrease in private demand. Germany, France, and Italy as individual large members of the Eurozone-12 area are also wage-led. The absolute value of the effect of an increase in the profit share on demand in individual countries like Germany and France is smaller than in the Euro area as a whole, because the net export effects are higher for these countries as they have a much higher export and import share in GDP due to trade with the other European countries as well as non-European countries, whereas the Euro area as a whole is a rather closed economy with low extra-EU trade and high intra-EU trade. Previous studies show that small open economies in the Euro area, such as the Netherlands and Austria, may be profit-led, when analysed in isolation (Hein and Vogel 2008; Stockhammer and Ederer, 2008). A similar argument could apply to the rest of the EU. Thus, wage suppression, which keeps real wage growth below productivity and leads to a fall in the wage share in Europe as a whole is likely to have only moderate positive effects on trade balances, but it will have substantial negative effects on domestic demand. If wages were to change simultaneously in all the EU countries, the net export position of each country would change little because extra-EU trade is comparatively small. Thus, when all EU countries pursue “beggar thy neighbour” policies through wage suppression, the international competitiveness effects will be minor, while the domestic effects will be decisive.

Canada, Australia, China, South Africa, Mexico, Argentina, and India are profit-led. As small open economies with a high share of exports and imports in national income, the net export effects are higher in all of these countries. The effects discussed are only the national effects in isolation, i.e. assuming that the change is taking place only in one single country. The last column of Table 1 summarises the total effects, when there is a global race to the bottom - a simultaneous 1% decrease in the wage share in all of these large developed and developing countries. Comparing columns E and F, the contraction in the UK, as well as other wage-led countries (Eurozone-12, US, Japan, Turkey, and Korea) is now much higher. In this global race to the bottom scenario, a 1%-point simultaneous decrease in the wage share leads to a decline in the Eurozone-12 by 0.25% point of GDP. The effect now is economically far more important.

The profit-led economies of Canada, Mexico, Argentina, and India also begin to contract, when the effects of decreasing import prices and changes in the GDP of the trade partners on net exports are incorporated in a simultaneous race to the bottom scenario. These economies could still grow when they experience a fall in the wage-share alone, but when the wage share falls for all their trade partners, the expansionary effect of falling wage shares is reversed, as relative competitiveness effects are reduced and global demand contracts, when all countries are implementing a similar wage competition strategy. A 1%-point simultaneous decline in the wage share in the world leads to a decline in the global GDP by 0.36%-points (the average of the growth rates in column F of Table 1 weighted by the share of each country in the world GDP).² To reformulate the results positively, a 1%-point simultaneous increase in the wage share at the global level could lead to 0.36%-point higher rate of growth in the global GDP. This leads to the conclusion that the world economy in aggregate is wage-led; if there is a simultaneous decline in the wage share in all countries (or as in our case in the thirteen major economies of the world), global aggregate demand also decreases. It is worth clarifying that the world as a whole is wage-led not simply because the largest economies (the Eurozone-12, the US, the UK and Japan) are all wage-led, and small profit-led economies don't weigh up against these large economies, but also because in a race to the bottom situation the negative effects of the contraction in wage-led economies affect export demand for the other economies; and additionally relative price effects diminish as labour

² Kiefer and Rada (2015) estimate a VAR with only distribution and growth for a panel of 13 OECD countries and find weak profit-led regimes; however they include a mix of small open and large economies in the panel, which may have quite different structural parameters. It is not possible to arrive at a conclusion regarding the character of the growth regime in the global economy from such aggregate analysis.

costs fall in every country. The shift of regime in Canada, Mexico, Argentina, and India is precisely because of these latter two effects.³

To summarise, firstly, domestic private demand (the sum of consumption and investment) is wage-led in all countries, because consumption is much more sensitive to an increase in the profit share than investment is. Thus, an economy is profit-led only when the effect of distribution on net exports is high enough to offset the effects on domestic demand. Secondly, foreign trade forms only a small part of aggregate demand in large countries, like the Eurozone, UK, US, Japan, and therefore the positive effects of a decline in the wage share on net exports do not suffice to offset the negative effects on domestic demand. Similarly, if countries, which have strong trade relations with each other (like within the EU), are considered as an aggregate economic area, the private demand regime is wage-led. Thirdly, even if there are some countries, which are profit-led, the global economy as a whole is wage-led because the world is a closed economy. This makes intuitively sense; because planet earth is a closed economy, at least as long as we do not trade with Mars! Mainstream strategies that impose the same wage moderation policies in all countries, assume that the world as a whole, as well as the majority of countries, are profit-led. This is against the logic of our findings, given that the effects of a fall in the wage share on domestic consumption more than offsets the effects on investment.

How about the investment regime? An important finding in our research (Onaran and Galanis, 2014; Onaran and Obst, 2015) is that private investment is not very responsive to the increase in profits, but responds strongly to demand. This may partially be related to the difficulty in specifying the complex investment behaviour. In an alternative aggregate investment specification, Onaran et al., (2011) addresses this issue by disaggregating the profit share as non-rentier profits and rentier income share, and find significant positive effect of the non-rentier profits on investment in the US different from the recent empirical work on the US in the tradition of the neo-Kaleckian model, e.g. Hein and Vogel (2008), van Treeck (2008), Stockhammer and Onaran (2004), Onaran and Galanis (2014) who find no effect of the aggregate profit share on investments. Similarly Onaran and Yentürk (2001) fail to find a statistically significant effect of the profit share on investment in the Turkish manufacturing industry using panel data. Seguino (1999) even finds a negative effect of the profit share on investment in the manufacturing industry in Korea based on a single equation estimation.

³ See the multi-country theoretical model presented in Onaran and Galanis (2014) for details, Rezai (2011), von Arnim et al. (2012) and Capaldo and Izurieta (2013) present similar theoretical models with cross-country interactions.

Based on systems estimations using a SVAR model, Onaran and Stockhammer (2005) find a negative effect of the profit share on private investment in both Turkey and Korea. On the other hand, Bhaskar and Glyn (1995) and Naastepad and Storm (2006/7) find stronger profit elasticities of investment. Nevertheless, the literature on aggregate investment functions, usually finds a lower profit elasticity of investment (Chirinko 1993), compared to firm-level investment functions, which usually find a larger effect of cash flow on investment (e.g. Fazzari and Mott 1986; Bond et al., 2004; Orhangazi, 2008; Tori and Onaran, 2015).

In the case of the EU15 countries, Onaran and Obst (2015) estimate that when the wage share is decreased in all the EU15 countries, investment decreases in the majority of the countries (the UK, Germany, Spain, Greece, Austria, Portugal, Finland, Luxembourg). In countries such as Ireland, France, Italy, the Netherlands, and Sweden, where investment is profit-led, the increase in investment due to higher profits remains insufficient to offset the negative effects on domestic consumption.

The micro rationale of an individual firm cannot be generalised to the macro rationale of a country. Individual firms might prefer to reduce the labour costs of their own workers to increase profits (ignoring the effects of this on productivity and morale), but they would prefer all other firms to give a pay raise, so that there is someone to buy their goods. Even though a higher profit share at the firm level seems to be beneficial to individual employers, at the macroeconomic level a generalised fall in the wage share generates a problem of realisation of profits due to deficient demand in a wage-led economy. Furthermore, even in profit-led countries, a global fall in the wage share leads to a global aggregate demand deficiency, and potentially contraction in the profit-led countries as well. A seemingly rational pro-profit strategy at the level of an individual firm or a country is hence contractionary and counter-productive at the macro or global level.

2.1 Is a wage-led demand regime stable?

One important theoretical contribution of Bhaduri and Marglin (1990) is that whether an economy is wage-led or profit-led depends on the parameters of an economy, and these parameters are crucially determined by the social and historical framework of the economy. Thereby these parameters not only differ from one economy to another but also they may change in time. In particular, the sensitivity of investment to the profit share vs. capacity utilization (the accelerator effect in most of the empirical estimations) may depend how close the economy is to full capacity utilization and how much the profit share have been squeezed in the recent history. A higher capacity utilization and a lower profit share may increase the

sensitivity of investment to the profit share, and thereby increase the likelihood of a regime shift from a wage-led economy to a profit-led economy.

The endogeneity of the profit share parameter in the investment function can be the basis for the development of a model that analyses the long waves of capitalism from a Kaleckian point of view. In such a model the profit share parameter in the investment function could be a negative function of capacity utilisation and wage share and, at the same time, the wage share could be a negative function of unemployment. This would allow an economy to switch from a wage-led to a profit-led regime, and generate cycles. For example, an economy could be initially wage-led, then an exogenous rise in the wage share could cause a decline in unemployment and a rise in capacity utilisation; however due to the endogeneity of the profit share parameter in the investment function this could gradually transform the economy into a profit-led one, reducing economic activity and hence the wage share; the decline in the wage share would then transform the economy back into a wage-led regime, and probably instability could emerge if no policy intervention is made. Such a model could also be combined with the Godley/Minsky debt cycles, producing a post-Keynesian model of long waves in capitalism.⁴

The question of parameter shift, thus regime change is again an empirical issue. In most of our empirical research (e.g. Onaran et al 2011; Stockhammer et al 2009; Stockhammer and Onaran, 2004), we tried to identify such regime shifts, in particular where we worked with quarterly data in the case of the US, UK, and France. The hypothesis is that these countries were wage-led in the 1960s, and after the profit squeeze and high growth years, they may have shifted to a profit-led demand regime; this was then followed by a dramatic fall in the wage share and demand deficiency in the neoliberal era, which in turn may have triggered another shift in parameters towards a wage-led demand regime. We failed to find any evidence of structural break in the parameters of the investment function as well as other behavioural functions (for consumption, prices, exports and imports). The results also remained robust to introduction of dummy variables for potential structural changes in industrial relations and state policies. A possible reason for this could be that a change in the parameters –e.g. a rise in the sensitivity of investment to profit share in the 1970s- is valid only for a very short time period –e.g. a few years in the late 1970s. When the estimations are performed for sub-periods, which cover most of the 1970s or early 1980s –an unavoidable limit due to degrees of freedom in econometric estimations, the period under investigation is

⁴ I am grateful to Yannis Dafermos for this comment.

still a rather heterogeneous sub-period. Hence, even when we analyse different sub-periods, the average parameter we find still indicates that the regime is wage-led. Hence, one conclusion that we can derive from these results, over an extended period of time, the single country estimations reflect the average character of the demand regime, although regime shifts cannot be ruled out.

One other aspect of structural change that we were able to integrate in our analysis is the increasing impact of openness. Although we failed to find a change in the estimated parameters, as the share of exports and imports in GDP increase by increasing openness, countries tend to become less wage-led. Nevertheless this again has not altered the major character of the demand regime; e.g. the US economy remained to be wage-led in the 2000s as much as in the 1960s (Onaran et al.; 2011).

While the discussion about regime shifts are interesting, one finding stands out, which renders this debate less relevant from a policy perspective. The empirical findings summarized in Section 2 by various researchers indicate that the domestic economy is mostly wage-led, and the positive impact of rising profit share on investment is much smaller than its negative impact on consumption. The regime shift is likely to be triggered mostly by a change in investment behaviour. Given the large difference on the impact of profits on investment and consumption, a behavioural change is likely to leave the domestic demand regime still wage-led. Next relevant finding is the importance of the international interactions we summarized in Section 2. Simultaneous changes in the wage-share increases the likelihood of wage-led demand regimes even in countries, which would be profit-led in isolation (if they were the only country changing their wage share). This is due to the elimination of international trade effects of changes in functional income distribution when global interactions are incorporated. Hence, what really matters for individual economies is their domestic demand regime, and evidence so far suggests that this is wage-led in the majority of the economies.

This section only addresses the impact of potential changes in the behavioural parameters of the economy. In the final section below, we will revisit the issue of the stability of a wage-led growth regime from a political perspective building on insights from Kalecki and Marx.

3. An alternative policy scenario based on a mix of wage-led recovery and public investment

In this section we set out the effects on growth of a policy scenario that begins to reverse the decline in the wage share and is supplemented by an increase in public investment in social and physical infrastructure. Table 2 summarizes the effects of a coordinated mix of policies in the G20 targeted to increase the share of wages in GDP over the next 5 years by 1%-5% depending on the country and to raise public investment in social and physical infrastructure by 1% of GDP in each country.⁵ The effects on individual G20 countries are shown as well as on the G20 as a whole. As explained in Section 2 the impact of the increase in the wage share on growth varies in different countries according to the structure of their economies, notably their investment, and export and import shares. The proposed policy mix in this section takes account of this by proposing differential increases in the wage share by groups of countries. It nevertheless shows that growth in all G20 economies is raised by a coordinated increase in the wage share.

Column A of Table 2 postulates increases in the share of wages in GDP of between one and five percentage point according to the country across the G20 over five years. Countries are subdivided into three groups, starting with countries where growth is predominantly wage-led including the Euro-area, the UK, the US, Japan, Turkey and Korea. Increasing the share of wages in GDP by 5% point in these countries could result in a wage-led recovery offsetting any negative effects on net exports or private investment as the current characteristics of the economies indicate strong internal demand effects (the details of these estimations are summarized in Table 1 above). The second group includes Canada, Mexico, Argentina, and India, where the wage share could be increased by 3% of GDP. While growth in these countries when they are treated in isolation is profit-led, a simultaneous increase in the wage share in the G20 (even at an equivalent amount in all countries) would lead to higher growth in these countries, as well. Finally, in the third group, a modest increase in the wage share by 1% of GDP in China, South Africa, and Australia can be pursued as part of a coordinated policy package. In this last group, the effect of a rise in the wage share would have an impact on net exports, which at first sight would limit the policy space for wage increases. However, part of the policy mix is to raise public investment that in the short term

⁵ This simulation is based on Onaran (2014) prepared for the L20 policy statement at the G20 meeting in 2014. L20 represents the interests of workers at the [G20](#) level, and unites trade unions from [G20](#) countries and Global Unions and is convened by the International Trade Union Confederation (ITUC) and Trade Union Advisory Committee (TUAC) to the OECD.

would stimulate growth and in the medium term would lead to a rebalancing of these economies, making them less reliant on export demand, changing the structure of their exports towards less labour intensive goods as well as goods with a lower price elasticity of demand in the medium term. This would help develop a more diversified economic structure, and thereby for potential for higher increases in living standards in the future.

Column B shows that in a scenario of coordinated wage-led recovery, all countries can increase their growth and overall this wage-led recovery could create 1.96% more growth in the G20 as a whole over the next five years. Thus a coordinated wage increase alone could almost achieve the target of the G20 Finance Ministers and Central Bank Governors to raise G20 GDP “by more than 2% above the trajectory implied by current policies over the coming five years”⁶. The effect of a coordinated public investment stimulus, i.e. increasing the ratio of public investment in physical and social infrastructure to GDP by 1% in each country is simulated under different assumptions about the size of multipliers. Column C includes the country specific multipliers identified in Onaran and Galanis (2014). Column D shows the growth effects in each country and overall G20 as an outcome of a coordinated (simultaneous) increase in public investment by 1% of GDP. The growth effects of a simultaneous public investment stimulus are significantly higher than those of an isolated stimulus in one single country, since the former involves cross-country interactions, i.e. international demand spill-overs. Column E shows the growth effects, if the multiplier is assumed to be 1.22 in all countries. This multiplier value is based on the mean of a large sample of multiplier values for public investment (based on the literature, which has been reviewed by Gechert (2013)⁷). Finally, columns F and G show growth effects under the assumption of a high value multiplier, 1.8, and a low value multiplier, 0.5, as used by the International Monetary Fund (IMF, 2009) regarding the values of capital spending multipliers. The overall results confirm that a public investment stimulus of 1% of GDP in each country can lead to 1.94-3.88% higher growth in the G20 – compared to business as usual.

Coming back to the initial goal to explore the effects of a policy mix, Columns H and K add the growth effects of this option under the assumption of different multipliers. The results show that a policy mix of coordinated wage increases and public investment stimulus can lead to higher growth in the G20 by 3.9% under the assumption of the lowest multiplier

⁶ https://www.g20.org/australia_2014/finance_ministers_and_central_bank_governors_meeting

⁷ Gechert (2013) reports the mean of 98 studies published between 1992 to 2013, providing a sample of 1882 observations of multiplier values for public investment.

of 0.5; 4.4% under the assumption of a multiplier of 1.22; 5.5% under the assumption of a multiplier of 1.8; 5.8% under the assumption of our country specific multipliers (estimated in Onaran and Galanis, 2014).

In summary, a policy mix of raising the wage share (e.g. through well set minimum wages and widening the coverage of collective bargaining) together with increased public investment in social and physical infrastructure would give a significant stimulus to growth and hence employment over a five year period in G20 countries. The crucial aim here is to help achieve the objectives of reducing inequality, and achieving social, environmental, fiscal, and financial sustainability.

The concerns regarding the inflationary effects of wage increases are also misplaced. In particular as some advanced countries such as the Eurozone is at the edge of deflation, policies to align wages increases with the historical increases in productivity in the past will only help to reach the inflation target, while at the same time helping to generate a wage-led recovery and decent job creation. Onaran and Obst (2015) estimates the impact of a coordinated increase in the wage share in the EU15 by 1%-point per year, and finds that this will lead to only a modest 1.2 percentage point increase in inflation in the EU15. This alternative scenario would be consistent with an annual nominal wage increase of 3.1% in the EU15 on average (Onaran and Obst, 2015).

Finally, a note of caution is in place here, as the simulation results presented above regarding the impact of wage and public investment policies do not take into account long term potential impact of these changes on productivity, employment and income distribution. An increase in public investment, growth and a decrease in unemployment could potentially feed back into income distribution, and lead to an increase in the wage share and decrease in the profit share, which in turn can affect the sensitivity of private investment to profits, as discussed in section 2. However, this could be a realistic assumption, if incomes policy mediates the impact of growth on distribution once a decent income distribution is achieved, and if public investment continues to stabilize an otherwise unstable private investment behaviour.

4. Concluding remarks: Political aspects of wage-led growth

This paper has first reviewed the empirical evidence supporting wage-led growth in the global economy, and then presented an alternative scenario of policy mix of wage-led growth and public investment. However, an important question policy question remains: Why

do the governments in Europe or elsewhere not take notice of these findings and proposals even after the lessons of the Great Recession? What are the barriers to a wage-led recovery?

Seemingly, there are some good reasons that may make change difficult. First, in the short-run, raising the share of wages is against the individual interests of each capitalist. There is a conflict between the micro rationale of the individual firm and the macro rationale of the sustainability of capitalism as a system. Although there is a fallacy of composition, i.e. a fall in the wage share can be profitable for an individual firm, but is not necessarily conducive to the growth of the markets for all the firms at the macro level, capitalists lack a Bonapartist state to intervene for their collective interest. There is no central committee of the capitalists. History shows that such a uniting force to save capitalism from itself comes only after long catastrophes, a credible threat from the labour movement to capitalism as a system, and a systemic alternative as it was the case in the presence of the anti-capitalist alternatives in the Soviet Union, Eastern Europe, and China.

Second, there is the lack of international coordination. Although a global race to the bottom in labour share leads to negative effects on growth for the majority of the countries, the area of manoeuvre for an individual country to benefit from increasing the wage share is limited if all the other countries are continuing their “beggar thy neighbour” policies. Large countries like the UK or the EU would be the major beneficiaries of a global wage-led recovery, and could take the initiative to export the good pro-labour policies to the rest of the world. But the lack of a Bonaparte is even more pronounced when it comes to international coordination. In Europe one institutional barrier is the coordination problem that European countries presently face. Europe needs a system of European wage bargaining coordination that aims at wages growing at least with productivity growth in each country and the inflation target of the European Central Bank. This requires institution building at the national as well as the European level. There is a coordination problem on the side of the labour movement as well. E.g. the trade unions in Nordic countries are not ready for coordinated bargaining, since they see the coordination with the other European countries with weaker unions as a threat to their power.

Third, despite the destabilizing effects of wage restraint, some capitalists may benefit at the expense of others even during the phases of downturns/crises via creative destruction a la Schumpeter. A priori individual capitalists do not know if they will be one of the winners.

However, all these three impediments were in place also during the Golden Age of capitalism in the aftermath of the Second World War. The capitalist state nevertheless has

been able to mediate conflict between labour and capital in the context of managerial capitalism with stable growth rates along with falling inequality. As this era of capital accumulation came to its limits due to increasing conflict between labour and capital, over-accumulation and falling rate of profit, the neoliberal financialized capitalism of the post-1980s has reshaped the role of the state. Financialization and capital mobility crucially narrows the area of manoeuvre of the states to stabilize capitalism and to save it from itself in this new era. Financialized and multinational capital does not want to give up its fall back options in return for a more stable economy. Financial markets have a disciplining power over the states in pushing particular class interests through state policies and they have a punitive power when states attempt to reverse these policies. Financial markets discipline states directly through the government bond markets. This exerts a direct pressure on both tax and public spending decisions regarding public sector wages, public employment or welfare spending (Onaran and Boesch, 2014). Regarding other policies that affect wages such as minimum wages, union and collective bargaining legislation, in addition to bond markets, the discipline works through the Multinational Companies' threat to relocate; this pressure is exercised over workers and the trade unions at the firm level as well as over the states as a threat of loss of tax revenues and job losses. The uncertainty regarding the response of the Multinational Companies and the financial markets creates more room for capturing the state through particular class interests.

If the coordination failure could be overcome and the power of finance could be controlled, would the central committee of the capitalists be Keynesian? No, not necessarily, at least not in the long run if they learn from the limits of the cooperative capitalism in the Golden Age.

In the long run, Kalecki (1943) gives the answer why capitalists would resist a rise in the wage share and policies of full employment, even if it leads to higher growth and possibly a higher income for the capitalists themselves:

“[...] the maintenance of full employment would cause social and political changes which would give a new impetus to the opposition of the business leaders. Indeed, under a regime of permanent full employment, the 'sack' would cease to play its role as a 'disciplinary' measure. The social position of the boss would be undermined, and the self-assurance and class-consciousness of the working class would grow. ... It is true that profits would be higher under a regime of full employment than they are on the average under laissez-faire... But 'discipline in the factories' and 'political stability' are more appreciated

than profits by business leaders. Their class instinct tells them that lasting full employment is unsound from their point of view, and that unemployment is an integral part of the 'normal' capitalist system.”

This is where Kalecki meets Marx. A rise in the wage share, higher growth and lower unemployment would contribute to a squeeze in profits; a depletion of the reserve army or similarly abolishing the punitive welfare reforms would relax the discipline of the sack on the workers. This would be further agglomerated by the longer term tendencies of the profit rate to fall due to a rise in the organic composition of capital along with higher rates of accumulation. Capitalism is inherently unstable, and each phase of stabilization policies burry the seeds of the next crisis.

Wage-led recovery and full employment, despite its rational appeal under the current circumstances of capitalism, is not compatible with the logic of a capitalist economy over an extended period of time. This does not mean that it cannot be achieved in particular eras in history, when the balance of power relations allow or the capitalists see it as the only stabilizing solution, as they did after the Second World War, which followed the rise of Fascism and the Great Depression. However, in the longer term egalitarian growth and full employment are like a mirage in capitalism; just when it is achieved, the labour movement faces a choice: to moderate conflict and save capitalism from itself or abolish it as a system. This is a knife-edge as unstable as the policies of wage restraint. Neoliberal financialization, which has followed the Golden Age of Fordist capitalism, has further made it harder for the States to opt for wage coordination policies to stabilize capitalism.

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Table 1. The summary of the effects of a 1%-point increase in the profit share (1%-point decrease in the wage share)

	The effect of a 1%-point increase in the profit share in only one country on					The effect of a simultaneous 1%-point increase in the profit share on % change in aggregate demand
	Consumption/GDP	Investment/GDP	Net exports/GDP	Initial change in private demand/GDP	% change in aggregate demand (D*multiplier)	
	A	B	C	D (A+B+C)	E	F
Euro area-12	-0.439	0.299	0.057	-0.084	-0.133	-0.245
Germany	-0.501	0.376	0.096	-0.029	-0.031	-
France	-0.305	0.088	0.198	-0.020	-0.027	-
Italy	-0.356	0.130	0.126	-0.100	-0.173	-
United Kingdom	-0.303	0.120	0.158	-0.025	-0.030	-0.214
United States	-0.426	0.000	0.037	-0.388	-0.808	-0.921
Japan	-0.353	0.284	0.055	-0.014	-0.034	-0.179
Canada	-0.326	0.182	0.266	0.122	0.148	-0.269
Australia	-0.256	0.174	0.272	0.190	0.268	0.172
Turkey	-0.491	0.000	0.283	-0.208	-0.459	-0.717
Mexico	-0.438	0.153	0.381	0.096	0.106	-0.111
Korea	-0.422	0.000	0.359	-0.063	-0.115	-0.864
Argentina	-0.153	0.015	0.192	0.054	0.075	-0.103
China	-0.412	0.000	1.986	1.574	1.932	1.115
India	-0.291	0.000	0.310	0.018	0.040	-0.027
South Africa	-0.145	0.129	0.506	0.490	0.729	0.390
Memo item: % change in GDP in G20 (average of Column F weighted by the share of each country in G20 GDP)						-0.36

Source: Onaran and Galanis (2014),

Note: The global simulation excludes Germany, France and Italy since they are part of the Eurozone.

Table 2: Scenario of a wage-led recovery and public investment stimulus

	Only wage led-recovery		Coordinated public investment stimulus of 1% of GDP					Policy mix: coordinated wage-led recovery+public investment of 1% of GDP			
	Increase in the wage share	Growth	Multiplier Onaran and Galanis (2014) (3)	Growth with multiplier in Onaran and Galanis	Growth with Multiplier=1.22 for all countries (4)	Growth with Multiplier=1.8 (5)	Growth with Multiplier=0.5 (6)	Growth with multiplier in Onaran and Galanis	Growth with Multiplier=1.22 for all countries (4)	Growth with Multiplier=1.8 (5)	Growth with Multiplier=0.5 (6)
	A	B	C	D	E	F	G	H=B+D	I=B+E	J=B+F	K=B+G
Euro area (12 count	5	1.19	1.59	3.13	2.30	3.39	1.56	4.32	3.49	4.58	2.75
United Kingdom	5	1.06	1.20	2.37	2.04	3.01	1.18	3.43	3.10	4.06	2.24
United States	5	4.55	2.08	5.29	3.16	4.66	2.64	9.84	7.71	9.21	7.20
Japan	5	0.77	2.41	6.46	3.38	4.98	3.23	7.23	4.15	5.75	4.00
Canada	3	1.61	1.21	4.10	3.12	4.60	2.05	5.72	4.73	6.21	3.66
Australia	1	0.11	1.41	1.99	1.72	2.54	0.99	2.09	1.83	2.64	1.10
Turkey	5	3.42	2.21	4.87	2.69	3.97	2.44	8.30	6.11	7.39	5.86
Mexico	3	0.79	1.11	2.73	2.28	3.37	1.36	3.51	3.07	4.16	2.15
Korea	5	4.34	1.82	9.53	6.09	8.99	4.76	13.87	10.44	13.33	9.11
Argentina	3	0.68	1.38	3.34	2.58	3.81	1.67	4.03	3.26	4.49	2.36
China	1	2.01	1.23	6.06	4.33	6.39	3.03	8.07	6.34	8.40	5.04
India	3	0.13	2.18	4.75	2.66	3.92	2.38	4.89	2.79	4.06	2.51
South Africa	1	0.75	1.49	3.71	2.75	4.05	1.85	4.46	3.50	4.80	2.60
Growth in G20 (2)		1.96		3.88	2.42	3.57	1.94	5.84	4.38	5.53	3.90

Notes

1. Selected countries for which wage share data is available since 1970s.
2. Weighted average of growth in each economy
3. Onaran and Galanis (2014),
4. The mean of 98 studies published between 1992 to 2013, providing a sample of 1882 observations of multiplier values for public investment, Source: Table 1 in Gechert, S. (2013). What fiscal policy is most effective? A Meta Regression Analysis. IMK working paper 117.
5. The high value of capital spending multiplier reported in IMF 2009, <http://www.imf.org/external/np/g20/pdf/031909a.pdf>
6. The low value of capital spending multiplier reported in IMF 2009, <http://www.imf.org/external/np/g20/pdf/031909a.pdf>